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THE NUTRITIONAL STANDARDS OF ADOLESCENCE[1]

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An adequate food supply is the essential requisite of national existence. If too little food is available the first to suffer are the old people, and then the children, though these are often fed with the food designed for the mother who sacrifices herself for the well-being of her offspring.

Before the war great numbers of people were habitually in a state of undernutrition. This reduces the working capacity and diminishes the resistance to disease, especially to tuberculosis. Such a condition gradually undermining the welfare of a nation may be exemplified by giving a description of the food conditions in Germany, a knowledge of which has lately become available. It is stated by Rubner[2] that food difficulties first arose in the middle of 1916. One important article of food after another disappeared from the market or could be obtained only in homeopathic doses. Thus, the available amounts of meat, eggs, milk, and butter became less and less. Failure of the potato crop of 1916 led to the substitution of turnips in the diet, both in the cities and in the industrial centers during the winter of 1916–17, and from the effects of this diet, the people never recovered. There was insufficient milk for the children. The censorship of the press prevented the true condition from being generally known and people were taught to congratulate themselves upon their loss in weight.

A secret inquiry made at the end of 1917 led Rubner to report to the Imperial Ministry of Health how widespread the evil effect of the war

[1] Presented at the Children's Bureau Conference on Child Welfare Standards, Washington, D. C., May, 1919.

[2] Rubner, M.: *Berliner klinische Wochenschrift*, 1919, lvi, 2.

diet had been upon the welfare of the people. The psychology of the nation had changed. The only thought was to obtain a sufficient quantity of food, albeit devoid of flavor; there was no initiative, only unproductive depression. Children forgot how to laugh, to cry, or to play.

Information reached London early in 1918 that the insurance companies of Germany had secretly warned the government as to the failing health of the people, which was reported to be more disastrous in loss of life than were the military operations. This now appears as an undoubted reflection from the meeting described by Rubner. The latter states that certain highly placed individuals forbade a further prosecution of the inquiry.

Kraus describes how hunger forms an excellent background for disease, since anti-bodies are not produced as when adequate nutrition is possible. Hence, the tuberculosis death rate doubled during the war and reached the height prevailing twenty-five years ago.

Kraus[3] relates that the food conditions affected women in such a way as to produce cessation of the menses, sterility, and reduction in the quantity of milk of the nursing mothers, which milk was also poor in fat. The average weight of children at birth fell off. Cow's milk of inferior quality was given to children, for there was no longer any hygienic control. With the older children the evil effects of the one-sided diet became more pronounced the longer it was continued. A diet which was made up essentially of bread and potatoes proved injurious to children. There was a deficiency in protein, fat, and vitamines. The diet led to scurvy, tuberculosis, rickets, and anemia. Nervous diseases were aggravated and constitutional anomalies intensified.

Reports have also come out of Germany showing how an absence of butter fat led to stunted growth and the affliction of xerophthalmia, a disease of the eye, both of which symptoms can be experimentally produced in young rats in the absence of the fat soluble vitamine contained in butter fat. These stories are not German propaganda. An American medical commission conducted an investigation into the condition of the children of Treves after its occupation by the American Army and found a retardation in growth of two years, children of fourteen having the physical development of those of twelve.

In the Bohemian city of Prague a widespread presence of infantile scurvy is bitterly described by Epstein[4] as existing in the early sum-

[3] Kraus: *Berliner klinische Wochenschrift*, 1919, lvi, 3; Czerny: *Ibid.*, p. 4.
[4] Epstein: *Jahrbuch für Kinderheilkunde*, 1918, lxxxviii, 237.

mer of 1918. Almost every preparation for the welfare of the sick child had disappeared from the market, the rich buying at high prices the "last bottle" of such a material from the apothecary. Milk was very scarce at a time when the farmers were freely using half their milk, which was so necessary for sick children, in the preparation of butter. It is well known that this kind of profiteering had long been prevented in England.

These details are cited in order to emphasize the necessity of such an organization of agriculture or of food supply that the national welfare of a country be maintained. That such an organization is incompatible with industrial disorder is a self-evident proposition.

Both the quality and the quantity of food should be considered. Children should receive a diet containing a sufficient quantity of *vitamines*. Of fundamental importance for growth and good health is the butter fat contained in milk or taken separately in the form of cream or butter. This has been set forth above. Stunted rats which have been long deprived of this substance grow to normal size when it is added to an otherwise adequate diet, so that it may be presumed that, with the administration of butter fat to children whose growth has been retarded, normal growth will be obtained. Pork fat and vegetable oils, like olive oil, do not contain the fat soluble vitamine and cannot take the place of milk. Beef, eggs, liver, and kidneys are, however, quite rich in this material, and it is present in spinach, lettuce, beet-tops, and the like. Olive oil taken with lettuce or beet-tops may take the place of milk in the diet of adults. Through eating the green substances of the field the cow gains for her milk this growth-promoting, life-preserving vitamine. It follows from this that the milk of a cow nourished on clover from the fields will be of higher nutritive value than that of one fed from corn ensilage.

If a food be given which consists mainly of highly polished rice, or highly milled grains, beri-beri, a profound nervous disorder, results. This disease has not appeared in war time in the European nations because wheat has been milled at about 85 per cent or more, so that a large proportion of the bran, which contains the water-soluble vitamine, has remained in the bread. Beri-beri can also be cured by administering the aqueous extract of peas or rice polishings or of the evaporated salts of milk. When a child can receive an ordinary mixed diet there is no danger in partaking of white bread.

Scurvy appears when the diet contains no anti-scorbutic vitamines, for example by using diets which are free from fruits, fresh vegetables, and tubers such as potatoes. The cure is found in lemon juice, fresh vegetables, potatoes, germinated peas, beans and lentils, and in canned tomatoes. Hess finds that the younger and more tender the green vegetable, the greater its vitamine content, hence an instinctive dietetic preference.

The question of vitamines for the welfare of the children is bound up in the development of dairy farming, fruit culture, and the production of fresh vegetables.

Furthermore, milk contains salts for the growth and repair of the bones, protein for the growth and repair of the muscles and other organs of the body, together with fat and sugar which give fuel for the maintenance of the human machine. Very few people realize that the cost of milk per 1000 calories is usually only one-half the cost of beef. Thus, in Paris on September 1, 1918, 1000 calories cost, as milk 98 centimes (equals 17 cents), as beef 175 centimes (equals 31 cents); and in New York on January 1, 1919, 1000 calories cost, as milk 24 cents, and as beef 45 cents. In Paris beef was 82 per cent more costly than milk, and in New York it was 87 per cent more costly. The controlled London market does not lend itself for comparison. On account of the great value and lesser cost of milk the writer has on other occasions urged that a family of five should not buy meat until it has purchased three quarts of milk daily.

Milk is wanting in iron and hence children should be given green substances whch contain this element, especially spinach which contains a considerable quantity. The yolks of eggs also contain it, as do, of course, beef and beef juice.

The curse of the ignorant and poorer classes is the giving of tea and coffee to their children instead of milk. This is done in families in which meat is regularly purchased. There is not sufficient education for the parents to realize that milk is a cheap and well-nigh indispensaable body-building food. It is not desirable to give to children or to adults the minimal quantity of protein compatible with existence, but it is safer to allow protein in a certain excess of the actual needs in order that the tissue cells be filled up with protein. Rubner has called such material "the improvement quota" of protein and there is evidence that this descriptive terminology is justified. This, however, does not warrant the eating by any man of a pound or more of beef a day, meat

which costs five times as much fodder to produce as does a similar food value in milk.

With regard to a sufficiency in the quantity of a diet the question becomes involved in the number of calories necessary for the maintenance of the living organism at various ages.

Below are presented the relative physiological needs of food, in the first column as estimated by Atwater, and in the second column as adopted by the Inter-Allied Scientific Food Commission of 1918.

Relative physiological needs

	AGE IN YEARS	ATWATER	INTER-ALLIED SCIENTIFIC FOOD COMMISSION
Child	0 to 2	0.3	0.5
Child	2 to 6	0.4	
Child	6 to 10	0.5	0.7
Boy	10 to 12	0.6	0.83
Girl	10 to 14	0.6	0.83
Boy	12 to 14	0.8	0.83
Boy	14 to 16	0.9	1.00
Girl	14 to 16	0.7	0.83
Men		1.0	1.00
Women		0.8	0.83

The British Food Committee of the Royal Society had computed that an average man doing an average day's work required 3000 calories, as ingested, or 3300 when the supply was considered from the national standpoint and allowed for waste. When it later computed the quantity of food available for their whole population in the five year pre-war period 1909–13, dividing it among the population in accordance with the relative values adopted by the Inter-Allied Scientific Food Commission, they found that 3,410 calories had been available per man per day. With increased care in the use of food a national stock of 3,300 calories per "man" per day appears ample. The earlier statement that a nation could live on what it wasted before the war has been abundantly refuted.

The study of standards of metabolism has occupied much time during recent years. At the time of the establishment of the Russell Sage Institute respiration calorimeter in Bellevue Hospital satisfactory standards for the determination of what constituted normal metabolism were nonexistent. From the work of Du Bois and his associates it has

been firmly established that the well nourished, normal, adult man, when resting in bed before breakfast, produces 40 calories per hour per square meter of surface within an error limit of about 10 per cent. This is known as the basal metabolism. Du Bois found that the metabolism of boys between 12 and 13 years old was 50 calories per square meter of surface, or 25 per cent higher than in adult men. At this time, before the onset of puberty, the intensification of the growth impulse is accompanied by a greatly increased metabolism when height and weight are regarded. Furthermore, Du Bois investigated the metabolism of these same boys two years later under identical experimental conditions. The metabolism per square meter of surface had fallen so that it was only 11 per cent above the average for the adult man. In the three youngest boys the metabolism was actually greater in calories produced during the twelfth year than during the fourteenth year, although the boys showed gains in weight of between 35 and 50 per cent. It is well known that a normal boy is extremely active at this period of his life. Investigations by Gephart have shown that American boys in St. Paul's School partook of as much as 5000 calories daily. Sir Henry Thompson collected data, prior to his death on an Irish passenger steamer sunk by a German submarine in the summer of 1918, which showed an average consumption of 3,500 calories daily by English school boys, even in the difficult days of the winter of 1918. At Eton and Harrow the spirit of patriotism at one time certainly caused too great a voluntary restriction upon the quantity of food taken and many boys lost in weight, often to the detriment of their health.

It has been reported from Berlin[5] that, in an asylum for foundlings in the third year of the war, an attempt was made to nourish three boys between six and eight years old with food containing 1,000 calories, and four other boys between eleven and fourteen with 1,334 calories. This may be calculated as being less than the basal metabolism of the children and the result was what was to have been anticipated, a loss in weight and in body protein of all these children, who were not only under height for their age but under weight for their height.

Five thousand calories daily certainly appears to be an extravagant quantity of food to furnish a boy. It is 20 per cent more than the amount consumed by a soldier at hard drill. It would be very interesting to investigate the economic efficiency of the muscles of the grow-

[5] Fuhge: *Jahrbuch für Kinderheilkunde*, 1918, lxxxviii, 43.

ing boy. Since his basal metabolism is higher than that of a man it is not at all unlikely that his muscular efficiency is on a lower plane, that is to say, that he may require more energy to walk or to move a bicycle a given distance than would an adult of similar height and weight. This point has never been investigated.

A chart showing the food requirements of boys from birth to sixteen years of age, as calculated from all the material available a year ago,[6] will soon be published.[7] To this have been added the requirements prescribed by the Inter-Allied Scientific Food Commission; the requirements calculated by Atwater; the actual consumption of food by rather inactive school boys, investigated by Carl Tigerstedt in 1912, reports of which have just reached this country; the reported food intake of American and English school boys and of English school girls.

In addition to this it may be noted that Pflaundler's[8] suggested corrections of the erratic, official dietary for the children of Munich, as of January 1, 1918, are in full accord with the recommendations of the Inter-Allied Scientific Food Commission from the end of the first year to the tenth year of age.

On reading the evidence it appears that much knowledge is lacking, much is needed to fill in the picture. There is now ample food in the country. For it there is paid by our people twelve thousand million dollars per annum, or one quarter of the income of the working population. Housewives are not organized politically, militant suffragists have no interest in the kitchen, but the time is coming when the importance of a more thorough understanding of the science of nutrition will be realized in the land.

[6] Lusk, G.: *Journal of the American Medical Association*, 1918, lxx, 821. The literature references are given here.

[7] The chart will appear in the Proceedings of the conference, soon to be issued.

[8] Pflaundler: *Münchener Medizinische Wochenschrift*, 1918, lxv, 173.

RECENT ADVANCES IN OUR KNOWLEDGE OF FOOD SELECTION AND PREPARATION

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Most of us took the slogan "Win the War in the Kitchen" so seriously that all our thoughts were concentrated on the problems arising from the special needs of food conservation. Now we are, for the time at least, rejoicing in our freedom to use white flour and sugar again; and any article summarizing food conservation results would surely be passed by unread. Consequently no attempt will be made to report these results at this time. Later, when the reaction is less evident, we may be able to learn from those experiences a good deal that is applicable to the usual conditions of living.

Leaving out such material, however, makes less than usual to report for the year. It is unfortunate that most of the work which is being done in this line in the different colleges and universities is not published. While much of it is undergraduate work, it would be excellent practice for students of different institutions to compare notes on results and receive outside criticism. It is to be hoped that some method of working out this plan will soon be formulated by the Science Section of the American Home Economics Association.

Most of the extended work on cooking problems that was published this last year has appeared in the JOURNAL OF HOME ECONOMICS. Nevertheless, it may be worth while to include mention of those results in this summary, together with what has appeared in more technical periodicals.

Bread. Cohn and Henderson[1] report the possibility of improving the gluten in the flour and stimulating the growth of yeast in bread making by increasing the acidity of the dough. Acids, alkalies, and certain salts produce changes in the elasticity, tenacity, and cohesiveness of the protein, partly by modifying the swelling consequent on absorption of water. Weak acids, such as lactic acid or vinegar, can be added to the dough with good results, the activity of the yeast being greatly increased thereby. The amount to be added will vary with the amount of yeast used, and the length of the fermentation process.

[1] Physical Chemistry of Bread Making. *Science*, 1918, p. 501.

The authors recommend determining this experimentally in individual cases by testing the resulting loaf when baked. A few drops of methyl[2] red are added to a slice of the bread. The solution is made by dissolving 0.02 per cent of methyl red in 60 per cent alcohol. The reagent is allowed to remain on the bread for five minutes. The acidity of the dough is right if the methyl red then shows no orange color.

The writers conclude that the acidity of the dough at the time of baking is the most important variable factor in bread making. They point out that the proteins in wheat-substitute flours absorb more of the free acid than do wheat proteins in dough, thus reducing the natural acidity of such doughs. This would account for the necessity of increasing the amount of yeast to produce good results in substitute breads.

The Connecticut State Station Bulletin[3] reports a series of baking tests conducted in several bakeries. A proprietary yeast food containing 25 per cent calcium sulphate, 9.7 per cent ammonium chloride, 0.3 per cent potassium bromate, 25 per cent sodium chloride, and 40 per cent wheat flour was used. As a result "not only half the normal amount of yeast (was required), but by using this smaller amount of yeast less carbohydrates were destroyed, and the presence of the . . . . salts, more particularly ammonium chloride, stimulated yeast production, with an actual increase of protein in appreciable amounts. Moreover . . . . this saving of food ingredients was secured without any sacrifice in the quality or nutritive value of the bread."

Mrs. Norton in her address at the recent Home Economics meeting in Chicago spoke of the need to consider possible saving in communal cooking. Anice W. Whitney in[4] "Communal Kitchens in European Countries" reports the movement for such kitchens successful in many of the recent warring countries. These make not only for the conservation of food and fuel, and lessen cost of production, but give opportunity to the poorer classes to obtain both cheaper and better food. It would seem surely that at least bread baking could become communal here. A recent study[5] of the percentage of families, grouped by nationalities,

[2] Henderson, L. J. Preventing Rope in Bread. *Science*, vol. 48, pp. 247–8. Cohn, Cathcart, and Henderson. Measurement of the Acidity of Bread. *Jour. Biol. Chem.*, vol. 36, pp. 581–6.

[3] Twenty-second Report on Food Products. Bul. 200 (1917), pp. 101–161.

[4] Mo. Rev. U. S. Bur. Labor Statistics, 6 (1918), no. 6, pp. 58–63.

[5] A Comparison of the Use of Baker's and Homemade Bread among Different Nationalities in the United States. *Jour. Home Econ.*, vol. x, pp. 561–3.

who already buy rather than bake their bread, is interesting in this connection.

Fats. Interesting work[6] on the absorption of fat in doughnuts made from varying recipes is reported from the University of Chicago. The conclusion is drawn that increasing the fat or the sugar in the recipe results in the absorption of increased amounts of fat in frying; while increasing the egg or the flour decreased the absorption. This, it is thought, accounts for the difference in the percentage of fat (21%) reported in the Government Bulletin on the Chemical Composition of Food Materials, and the 34.7 per cent found as the average fat in their "home made" doughnuts prepared from standard recipes. Cotton-seed oil at 200°C. was the fat used in frying.

Since there is still a shortage of fats for world use, it may be worth while to call attention to the article on Vegetable Oils and Their Use in Cooking.[7] The successful employment of these fats in pastry and cake, and in other ways, with consequent decrease in expense is noted.

The housewife who must choose between butter and margarine will be interested in an article by Halliburton and Drummond[8] on the nutritive value of the two with special reference to the fat-soluble vitamine. This they find present in margarines made from "oleo oil" but not in those in which vegetable oils or nut butters have replaced the beef-fat. They state "It would be truer economy even for the poor to purchase smaller quantities of oleo-oil margarine if they cannot afford the luxury of butter."

Cake. Also from the University of Chicago laboratory are reported experiments in cake making.[9]

"In cake making, manipulation is one of the chief factors in determining the quality of the product. In an ordinary cake the method of combining ingredients is not in itself important except as it controls the amount of mixing and beating. There is an optimum amount of beating that is desirable, from one to two minutes, depending upon the energy with which the beating is done. Less than that gives a coarse crumbly texture; more gives a compact texture with tunnels.

"The relation which the various ingredients bear to each other is also important. Increasing the sugar up to a certain point makes the

[6] Fat Absorption in Frying Doughnuts. M. A. McKee. *Jour. Home Econ.*, vol. x, pp. 18–20.

[7] Blunt, *Jour. Home Econ.*, vol. x, pp. 23–26.

[8] *Jour. Physiology*, vol. 51, pp. 235–251.

[9] Problems in Cake Making. Miller and Allen. *Jour. Home Econ.*, vol. x, pp. 542–7.

texture finer; increasing beyond that makes the texture coarse and causes the cake to fall. Increasing egg alone toughens the cake and produces tunnels with beating. Increasing fat alone makes the cake rich in flavor and tender. If used in excess, the cake will not hold its shape. Neither fat, sugar, nor egg can satisfactorily be increased alone beyond a certain point. All these must be increased together in such proportions that the effect of the fat and sugar on the one hand will offset the egg."

Egg-substitute powders. The number of egg-substitute powders on the market everywhere makes one believe they must be a financial success.[10] Analyses of a number of these show them to be composed of starch, a permitted coal tar dye for coloring, and gelatine or casein with occasionally a little albumin. They do not, of course, furnish the nourishment of eggs. One such powder on this basis shows a package which claims to be equivalent to twelve eggs, but really is, in amount of protein, equal only to 1.7 eggs; in amount of fat equal only to 0.14 eggs; in fuel value equal only to 2.6 eggs.

Baking tests[11] made with seven of these powders substituted in turn for the egg in true sponge cake gave failures. Moreover, the average selling price is more for a pound of these powders than would be paid for the dry material of hen's eggs at 40 cents per dozen.

Milk. A reprint[12] from the British Public Health Reports suggests that in present conditions in cities, especially in hot weather, it is often desirable to use dried milk powder in preference to ordinary milk. Dr. Mendenhall[13] writes that little attention has been paid in the United States by manufacturers of dried milk to the advisability of putting out a product suitable for use in infant feeding and at the same time cheap enough to attract general notice. As yet very little of the best milk is dried and much on the market is made from an inferior quality of milk and contains bicarbonate of soda or some other alkali. She believes it should be possible to put out a good grade at a reasonable price. Osborne and Mendel in an article on the Water-Soluble Vitamines in Milk[14] point out that baby food made by diluting top-milk and adding sugar give the child relatively too small a proportion of water-soluble

[10] Egg-Substitute Powders. *Am. Food Jour.*, February, 1918.
[11] Baking Experiments with So-Called Egg-Substitutes. *Am. Food Jour.*, May, 1918.
[12] *Am. Food Jour.*, October, 1918.
[13] Powdered Milk and the Dairy Problem. *Forecast*, June, 1918.
[14] *Jour. Biol. Chem.*, vol. 34, pp. 537–553.

vitamine, and think that while this may be sufficient if enough is taken, if the child's appetite fails the reduction of the vitamine may cause endless dietary troubles. They believe there is need for prompt investigation to determine the best way to reinforce the vitamine content.

Hammer and Goss[15] investigated the bacterial content of ice cream. They report that proper care of the freezer is of great importance in lessening contamination, also that there is usually a fall in the bacterial count if the cream stands packed after freezing. They find water ices contain far fewer bacteria than ice-cream, and that ice creams other than vanilla contain large numbers of bacteria.

Vegetables. In an article on the Dietary Value of the Potato, McCollum, Simmonds, and Parsons[16] find no extraordinary value in the potato protein for growth, instead, that young rats did not make normal growth on it until casein was added to their diet. Since other experimenters have reported successful feeding of adults with potatoes and margarine practically free from protein, they make the interesting suggestion that the proteins required for growth and repair may not be identical.

The effect of various methods of drying vegetables on their vitamine-content is important.[17] Givens and Cohen show that cabbage dried in a blast of air at 40–52°C. retains only some of its antiscorbutic qualities. Dried two hours at 75–80°C. and then at 65–75°C. for several days, it has lost all of this property. Cooked thirty minutes and then dried at 65–75°C., both cabbage and potatoes have no antiscorbutic power. Fresh tomatoes,[18] which are a very effective antiscorbutic agent, when dried raw in a blast of air at either low (35–40°C.) or high (55–60°C.) temperature still retain a significant amount of their antiscorbutic potency. Hess and Unger[19] have shown that canned tomatoes retain their antiscorbutic property and have actually fed them in place of orange juice to infants living on pasteurized milk. This is of special interest when we consider the persistent use of canned tomatoes by the very poor.

[15] Bacteria in Ice-Cream. Iowa State Bulletin 174.

[16] *Jour. Biol. Chem.*, vol. 36, pp. 197–210.

[17] Antiscorbutic Properties of Desiccated and Cooked Vegetables. *Jour. Biol. Chem.*, vol. 36, pp. 127–145.

[18] Antiscorbutic Properties of Vegetables. Given and McClugage. *Jour. Biol. Chem.*, vol. 37, pp. 253–265.

[19] Canned Tomatoes as an Antiscorbutic. *Proc. Soc. Exp. Biol. and Med.*, 16: 1–1918.

It has also been found that vegetables dried in a current of air from an electric fan do not have the keeping qualities of those dried with artificial heat, or with heat from the sun.[20]

Osborne and Mendel[21] find a small amount of green vegetables supplying fat-soluble vitamine for long continued and vigorous growth, and say "if one may draw conclusions from the limited data now available, it seems that green vegetables supply an important addition to the diet of man," and suggest that care should be taken not to reduce greatly the quantity of green vegetables customarily eaten until we have further knowledge of foods."

Given[22] points out that there may be a loss of inorganic constituents, particularly of calcium, not only in the cooking of foods but also in the preparation of them for drying, and calls attention to green vegetables as a possible source of calcium of hitherto unrecognized importance. Further work,[22a] however, leads to the conclusion that the calcium in green vegetables is not so available as in milk.

A new method of preserving[23] fruits and vegetables is by the use of asphyxiating gases ($COCl_2$, Cl, Br). The odor of the gas quickly evaporates, and it is claimed that the product is perfectly wholesome food and that this method may supersede refrigeration.

Canned fish. A leaflet[24] intended for housewives living in suitable regions, urges the canning of fish for domestic use.

The examination[25] of 44 samples of commercially canned salmon find all sterile. Twenty cans analyzed for tin show it to be present in the fish in amounts so small as to be insignificant.

Canning. Experiments have shown that the preliminary[26] cold dip after blanching vegetables for canning does not affect the bacteria present nor influence the question of the subsequent spoilage. Miss Denton[27] finds that with blanching, many more vegetables may be placed in the jar, but that with vegetables especially difficult to can

[20] Connecticut State Sta. Bul. 200.

[21] Vitamines in Green Foods. *Jour. Biol. Chem.*, vol. 37, pp. 187–210.

[22] Dried Vegetables with Special Reference to Their N and Ca Content. *Jour. Am. Med. Assn.*, vol. 70, p. 1743. [22a] Experiments on the Utilization of N, Ca, and Mg, in Diets Containing Carrots and Spinach. McClugage and Mendel. *Jour. Biol. Chem.*, vol. 35, p. 345.

[23] Lo Menoco. *Chem. Abs.*, 1918, p. 1401.

[24] U. S. Dept. Com., Bur. Fisheries, Econ. Cir. 28.

[25] Bushnell. *Jour. Ind. and Eng. Chem.*, vol. 9, pp. 678–9.

[26] Bushnell, Influence of Cold Shock on the Sterilization of Foods. *Jour. Ind. and Eng. Chem.*, vol. 10, p. 432.

[27] What Temperature is Reached Inside the Jar during Home Canning? *Jour. Home Econ.*, vol. x, pp. 548–552.

there is a distinct disadvantage in packing too closely, since with more boiling water in the jar the sterilization temperature is more quickly reached. She emphasizes the wastefulness of not utilizing this juice afterwards, and gives suggestions which make it less possible "for two women using the same material and following the same directions with equal care and intelligence" to obtain very different degrees of sterilization.

Jelly making. In Kitchen Tests for Pectin in Jelly Making,[28] Miss Denton reports the successful use of wood alcohol or of denatured grain alcohol for the test, but finds the Epsom salt method unreliable for the housekeeper.

A Method of Preparing Pectin[29] by its precipitation with ammonium sulphate should make commercial pectin cheap enough for practical use.

Baking powder. A recent standard[30] adopted by the United States Department of Agriculture makes the required available carbon dioxide 12 per cent. This should give us more uniform products.

Saccharine. An article by Burge[31] in *Science* concludes that saccharine in food not only is a sweetening agent but, although not oxidized itself, one facilitating the oxidation of other food materials. This it does by stimulating the liver to an increased output of catalase which is the enzyme in the body chiefly responsible for oxidation. Burge says that Herter and Folin have reported saccharine, in the amounts that would be used, harmless; but he believes it should be positively helpful in the diet, particularly in diabetes, where the chief difficulty is with lack of oxidation.

Various foods specially recommended. Various kinds of foods have been urged on our attention, some old, many more or less new. Langworthy and Holmes[32] report the dasheen as desirable from the digestive standpoint.

Soy beans contain, we are told in the *Journal of Biological Chemistry*,[33] both the water-soluble and the fat-soluble vitamine, together with protein of high physiological value. The United States Depart-

[28] *Jour. Home Econ.*, vol. x, pp. 520–521.
[29] Hunt. *Science*, vol. 48, pp. 201–202.
[30] *Am. Food Jour.*, March, 1918.
[31] *Science*, vol. 48, pp. 549–550.
[32] Digestibility of the Dasheen. Bul. 612, Sta. Rel. Service.
[33] Daniels and Nichols. *Jour. Biol. Chem.*, vol. 32, p. 91.
Osborne and Mendel. *Jour. Biol. Chem.*, vol. 32, p. 376.

ment of Agriculture has put out a bulletin[34] on soy-bean flour, and Roberts and Miller[35] tell how to make soy bean meal at home.

Peanuts[36] also are especially recommended to our notice, as well as the banana.[37]

The Jerusalem artichoke,[38] the American papaw,[39] alligators,[40] whales[41] and seals, and reptiles[42] are all called to our attention as food products.

In the Utilization of Some Nuts as Food, Lieutenant Cajori[43] discusses the value of various kinds of nuts, while Drummond[44] writes, on the Nutritive Value of Certain Fish, showing that the coagulable proteins of the muscle tissue of cod, herring, and canned salmon have a nutritive value as high as those in beef, and that "fatty" fish may be a valuable source of the fat-soluble growth-vitamine.

Perhaps no food has received more commendation recently than has milk, especially as an essential in the dietary of children.

[34] Office of Exp. Sta. Circ. 113.
[35] *Jour. Home Econ.*, vol. x, pp. 64–70.
[36] Feeding Experiments with Peanuts. *Jour. Biol. Chem.*, vol. 33, p. 295.
Peanuts as a Great American Food. U. S. Dept. Agr. Year Book, 1917, pp. 289–301.
Peanut Flour. U. S. Dept. Agr. Circ., 110.
[37] *Sci. Mon.*, 1918, pp. 65–75.
Jour. Biol. Chem., vol. 36, pp. 171–189.
[38] *Sci. Mo.*, 1918, pp. 260–269.
[39] *Jour. Home Econ.*, vol. ix, pp. 505–511.
[40] *Science*, vol. 47, p. 1226.
[41] *Nation*, March 21, 1918, p. 45.
[42] *Sci. Mo.*, December, 1917.
[43] *Jour. Home Econ.*, vol. x, pp. 304–311.
[44] *Jour. Physiol.*, vol. 52, pp. 95–109.

HOME DEMONSTRATION SCHOOLS AND SHORT COURSES IN FLORIDA

SARAH W. PARTRIDGE

Florida District Home Demonstration Agent

Not all home economics teaching is done in the class rooms. For the past three years the home demonstration clubs of Florida have been studying in their monthly meetings well planned lessons, the outlines for which were prepared by the State Home Demonstration Staff at the Florida State College for Women. At each meeting the lesson is supplemented by a demonstration given by the County Home Demonstration Agent, or some member of the local club. In January, 1919, the following announcement was made, and three courses were offered.

In order to assist the women of Florida to learn the essentials of an economical and efficient diet, the Florida State College for Women, in coöperation with the United States Department of Agriculture and the State College of Agriculture, offers extension schools for housekeepers. These schools may vary in length from two to five days, depending upon the number of housekeepers interested. The school may be given independently or in connection with a home demonstration club, a Woman's Club or other organization. One or more State workers, in addition to the county home demonstration agent, will give the course. At the close of the Housekeepers School an examination will be given those who care to take it. The Florida State College for Women will give a certificate to those who have attended 80 per cent of the meetings and successfully passed the test. If a home demonstration club is pursuing one of the regular home demonstration courses, the members may wait until the end of the year before taking the examination. The certificate granted does not guarantee the person certificated to be a skilled chef, but it does presuppose a knowledge of the fundamentals of the cookery processes, an understanding of terms used, and the reason for the choice of foods in making a menu. The club or other organization agrees to furnish a suitable room, a stove, a table, a few cooking utensils, and the food materials used.

COURSE I—GENERAL CONSERVATION

1. Sugar saving
2. Use less fat
3. Conserve clothing
4. Backyard poultry
5. Fruit and vegetable culture
6. The use of eggs and milk
7. Meat substitutes
8. Child welfare
9. The home
10. Principles of cookery and preservation of fruits and vegetables

COURSE II—WHAT KIND OF FOOD AND HOW MUCH IS NEEDED

1. Food and the war
2. The day's menu
3. Sugar and other sweets
4. Breads
5. Meats and meat substitutes
6. Conservation of fats
7. Milk and milk products
8. Fresh fruits and vegetables
9. Food for children
10. A well filled market basket

COURSE III—ADVANCED STUDY OF FOODS

1. The human mechanism
2. Fuel for the human engine
3. How much food is enough?
4. Protein foods
5. Sugars
6. Starches
7. Fats
8. Food for children—Child welfare
9. School lunches—Food and care of adolescents.
10. Economics of the food problem.

There is no certificate granted for the completion of Course I. Clubs using Courses II and III are entitled to an examination on the completion of the course. All who successfully pass the test, with a grade of 75 per cent or more, will receive a certificate from the Florida State College for Women.

Extension Schools for housekeepers are planned to follow the work as outlined for Course II. If the club desires to have such a school, application may be made to the State Home Demonstration Agent, Florida State College for Women, Tallahassee. If the club desires, the examination may be taken at the close of the school or postponed until the series of programs has been given to the club.

Course III is detailed study of the chemistry of food and nutrition. It is planned for those who have studied some chemistry and wish to do some advanced work along that line.

The courses are planned to be given consecutively. Differences in seasons or some other reason may make it advisable to give the lessons in a different order. The members of each club may select the course they wish, and decide on the order of the programs.

In addition to the daily lecture and demonstration, special lessons in government bulletins were assigned for study, the bulletin "A Day's Food in War and Peace" being most generally used.

To date, twenty-seven full time schools, in which the course of ten lessons has been fully covered, have been held. 1032 women enrolled for study; 97 have taken written examinations. This seems a small

per cent of those attending, but when one remembers the reluctance with which an adult who has been for some years out of the class room takes a written examination, the number is encouraging. The papers handed in were excellent. The grading of the papers has been done at the Florida State College for Women. Of the 97 who tried the examination, 93 passed.

Eight schools of three days duration each, have been held. During this time, six of the ten lessons offered were studied. Others will be held during the year.

These schools have resulted in many instances in the organization of strong home demonstration clubs, which means a continuation of such study in monthly meetings, for the regular course of study taken up by the home demonstration clubs is based on a study of home problems.

The Eighth Annual Short Course for County Champion Club girls of Florida was held at the Florida State College for Women, Tallahassee, Florida, March 31 to April 12. Sixty girls, each of whom was a scholarship girl, were in attendance. They had made high records in canning or poultry club work in their respective counties, and had been awarded these scholarships by their local school boards or county commissioners. Each scholarship included the cost of travel from the club girl's home to Tallahassee and return, board during the two weeks, and laboratory fees. They varied in monetary value, from twelve to sixty dollars, the difference being caused by the difference in the cost of travel from various points in the state to Tallahassee.

The girls were divided, for work, into three sections: Section 1, young girls from elementary grades, who did unusual work because they were exceptionally bright; Section II, club girls between fourteen and eighteen years of age who were still in elementary grades; Section III, advanced girls in junior high school who had previously attended a short course. In addition to the daily classes in cookery, sewing, nutrition, and other kindred subjects which were conducted, special work in other subjects was given. Among the other subjects studied were: bacteriology in its relation to canning; basketry; the care of milk; the making of cottage cheese and butter; artificial incubation. An incubator was filled with eggs and cared for during the two weeks of the Short Course. The fine Rhode Island Reds that resulted from the hatch during the following week were given to the Practice House of the school of Home Economics, and the students are continuing the lesson in poultry by caring for them.

Not all of the time was devoted to work. An afternoon was spent by the girls as guests at the Governor's Mansion. While there, the girls were invited to cut as many of the rare blossoms from the beautiful rose garden, as they wished. Another hour was devoted to a visit to the Capitol, where the Legislature was in session. The club girls were received by the Governor and heads of the various State departments in their respective offices.

The College Y. W. C. A. rendered valuable assistance in caring for the club girls. Among other things that they did they appointed a "Big Sister" for each club girl, who saw that no girl had time for a lonesome hour. The student body did much for their entertainment.

One club member wrote on her return home: "I never worked so hard, or played as much in any other two weeks in my life."

The Short Course closed with an evening program rendered in the College Auditorium. At this time, the girls received their Short Course certificates, and the Special Club Certificates awarded those who had satisfactorily completed four years of club work.

There were four State Prize Winners on the rostrum: Pallie Matthis, State Prize Winner in 1914, who received her diploma from the Normal School of the Florida State College in June, 1919, and has since taken up the work of a County Home Demonstration Agent; Eula Trantham, State Prize Winner in 1915, who during 1918 made a high record in both canning and poultry clubs, her profit from the canning club being $195, from the poultry club $210; Ethel Gibson, State Prize Winner in 1917, who is completing a course in a business college, using money made in club work to defray expenses; Agnes Williams, State Prize Winner in 1918, who is now a student in the Florida State College for Women, working her way through, and paying incidental expenses with money made in club work. Her record for 1918, was as follows: She harvested from her one-tenth acre, 3745 pounds of tomatoes, 119 pounds of onions, and then planted the plot in potatoes. She had an excellent yield from these. She canned and sold 1337 cans of tomatoes. Her receipts from fresh vegetables and canned goods were $185.24, expenses $65.77, profits $119.47.

The sixty girls attending were divided into the following groups: First year girls, 7; Second year girls, 19; Third year girls, 17; Fourth year girls, 14; Fifth year girls, 5.

The broad scope of club work is revealed in the fact that it holds the interest of girls through succeeding years.

RELATED ART FOR HOME ECONOMICS COURSES IN SMITH-HUGHES SCHOOLS

HARRIET GOLDSTEIN

University of Minnesota

In the Smith-Hughes plan for home economics education, one half of each school day is given over to home economics and related courses. These courses include not only the courses in the clothing and foods groups but the related science and the related art.

Through this Smith-Hughes plan it becomes not only the privilege but the responsibility of the departments of home economics to play an important part in art education. When the homemakers shall be so trained in the ideals of beauty that art becomes part of their daily life, it will not be long before the effect will be seen throughout the nation. To accomplish this end the art teachers and the home economics teachers of the country should work together for some efficient plan for making art work function with the home economics courses. Without this coöperation we cannot have the highest type of work in clothing, in house planning, or in house furnishing.

The subject matter of the art courses must be closely related to home economics problems, and the sooner the art problems can be carried over into actual construction the more vital the training will become. In all cases the art training should precede or parallel construction. To successfully work out such a plan the art teacher must get the home economics view point, and it is quite as necessary for the home economics teacher to have an art foundation for her work.

The aim of the related art course should be to train the student in art appreciation, so that beauty will become so strong a force that it will be a motive in everything she does. To do this there are certain fundamental art principles of which the student should gain such a practical knowledge that she will express them in her dress and in her home problems.

She must realize that the art of a fine painting or of a Gothic tapestry, for example, is just the same expression that she finds in a good chair or in a beautiful dress. If through these related art courses we can get rid of the old art school idea that the arrangement of objects on a canvas is art and that the arrangement of objects against a wall is house furnishing we shall have done a good piece of work.

The elements of all art are color and form, and its fundamental principles are proportion, centers of interest, rhythm, balance, and harmony. The student should have a working knowledge of each of these principles, for, in every home problem in which looks as well as use are to be considered, these principles must be followed. The girl must make so many conscious applications of these art principles that in time they will function unconsciously.

One way in which the high school student might be trained to understand and appreciate the laws of beauty is through the analysis of the objects all about her. She is already interested in the problems of dress and of home furnishings, and through the discussion of the art principles which may or may not be illustrated in these familiar things art will come to take on a vital meaning.

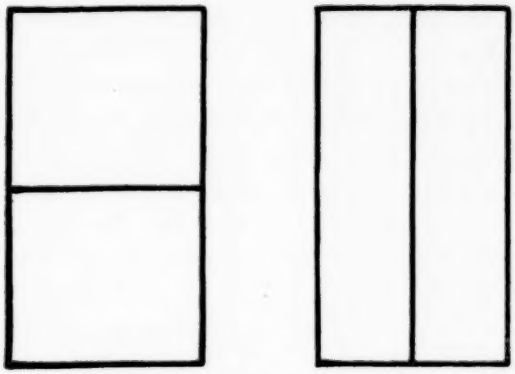
Proportion, or the Greek law of relationship, is the first art principle to be considered. A sense of proportion is in a very large degree an acquired sense. There must be a great deal of critical study before one becomes sensitive to subtle space relations. The student must realize that richness of material does not count at all if art is lacking; for example, a chair though made of cheap wood may be a good chair, chiefly because its proportions are good, and another made of a costly wood may be a poor chair because of bad space relationship. She must see that a well proportioned water pitcher may have the same art quality that a Greek vase possesses.

The principle of proportion is of the greatest importance in dress design; and in passing, let it be remembered that the problem of conservative dress which is concerning women just now, is to a large degree an art problem and depends upon the application of proportion, centers of interest, rhythm, balance, and harmony. In planning a dress design, one should think first of the silhouette and then of the lines within. For good proportion the silhouette or outline of the dress should not vary too greatly from the lines of the figure, for if there is too much contradiction, there is no relationship, and because of this bad proportion there is a lack of conservatism. On the other hand, modesty and good taste demand that the dress shall not follow the lines of the figure too closely.

Since various proportions or space relations have the effect of changing the appearance of the face and figure, one must study the outline of the figure to see if there is any variation from the average, and then adjust the lines and masses. For example, the angular outlines of

the too slender figure can be changed, apparently, by a broken silhouette, while one tries for the simpler outline where the figure is stout. With both of these silhouettes, there may be good examples of conservative dress which are at the same time adapted to the figure. If art principles are closely followed the dress will not look queer in a season or two. The student easily recognizes that the vertical lines make her look taller, and horizontal lines, shorter, but she often fails to carry the principle out far enough in planning collars, length of skirt, and waistlines, for example. She must know that the square collar will have a tendency to make a square face look more square. The length of the skirt should be regulated by the proportions of the figure, and not by the fact that "they" are wearing them eight inches from the ground this season, or four inches as the case may be. A skirt looks shorter with low shoes than with high. Before she leaves the study of proportion, the student must see that too obvious space divisions are monotonous and unpleasant, and that subtle relationships have charm.

The next principle is emphasis or centers of interest. It is easy to over-emphasize, to have too many centers of interest. That is true in some of the paintings of the old Masters. The student can see it easily enough in Raphael's "Transfiguration," where the picture is divided in the middle and her eye goes from one group to the other with equal insistence and does not know where to rest, but she is not nearly so apt to be sensitive to the same lack if she sees it in a home problem. It is exceedingly important for a successful design to have one chief center of interest. In a living room it might be the fireplace or a window with a beautiful view, or a fine picture, but the other centers should be subordinated. It is a violation of the law of emphasis when a house apparently possesses two front doors. A caller will hesitate, then may choose the wrong door, and be ushered through the dining room into the living room. Just a little more emphasis at the front entrance would spare embarrassing experiences. A dress with many embroidered spots has the same effect of over-emphasis, making the eye jump from one place to another. This point can not have too much attention given to it in decorative needlework problems. One must not let one's enthusiasm get the better of judgment. Enough embroidery may be used to add interest, but not to make conflicting centers of interest. In dress it is important to have the center of interest in the right place, near the face, not in a patch of white stocking, between a black shoe and a dark skirt, nor in a pair of white or light shoes worn with a dark dress or suit.



The effect of the horizontal and vertical line in rectangles of the same size

The same figure with dress design showing effect of horizontal and vertical movements in line

No matter how beautiful one's feet may be, the face should be the center of interest.

After proportion and centers of interest, one must think of rhythm, balance, and harmony. Rhythm is easy, consistent movement. A series of jerks, angles, and cross lines which leads the eye along a jagged path makes for restless or distracting movement. The easy movement of the lines of a good Japanese print shows this quality while many rugs and wall papers show its lack. One keeps the idea of movement in mind when hanging pictures. They should not lead away from, but toward a center of interest. Clothes which are so tight that they interfere with the rhythmic movement of the body violate this law.

Balance or rest comes after rhythm. Balance is very closely allied with proportion. If all the proportions are correct one has this feeling of rest or repose when looking at an object. In lamps and vases which have a very small base the lack of this principle is easily seen, but how about the woman with a large hat, heavy furs, and a short, tight skirt? The furniture in the room will not be balanced if the piano and bookcases are at one end, and there is only a small table and chair at the other.

Harmony or unity is the last of these five art principles and in a way may be said to embrace all the others—proportion, centers of interest, rhythm, and balance. There must be harmony in shape, harmony in size, and harmony in the colors used together. The principle which the painter follows in the shapes, sizes, and colors he places on his canvas is identical with that used by the woman when she sets her table, arranges her furniture, or makes a hat or a dress. The first consideration is shape harmony. When rugs and furniture are placed parallel to the walls of the room harmony is established; when they are placed at angles there is no harmony. When dresses are planned to somewhat follows the lines of the figure there is harmony. When waists are compressed to waspish shape, and bustles and leg o'mutton sleeves are worn, the laws of harmony are violated. When areas that differ extremely are put together there is lack of harmony in sizes. A large picture with a tiny one under it or next to it is absurd. In color harmony the student must recognize that there are three factors to be considered, the warmth or the coolness of color, its lightness or darkness, and its brightness or dullness. She will learn by studying good pictures, good interiors, and good dress design that large areas should be subdued in tone and that contrasts should be used only in small quantities. By

studying the people around her the student will see that all can be classified as warm or cool or medium in their coloring. Of course, this is a relative comparison, for flesh tones are always somewhere between yellow orange and red orange, but the hair and eyes have the effect of making the color scheme cooler or warmer. The red haired person, whose coloring is really red orange, is the warmest type and would, therefore, find that the warmer colors harmonize and the cold colors contrast with her skin and hair. Hence she would appear to best advantage in warm hues, as brown, or warm taupes, with cool colors used only as contrasting notes. There is one striking exception, however, for red-violet although one of the warm colors, is unbecoming to the red-haired person. The brunette also who is warm in coloring will be able to wear the colors toward the red end of the spectrum. The brunette with little color can supply warmth by using dull warm tones, and as bright colors have a tendency to put yellow into the face, she must avoid them, except for accents not used near her face. The blonde with a blue-white quality in her skin, blue eyes, and light hair is the cool type and finds the cooler grays, dull blues, dull dark greens, and dull violets more becoming. Tans and grays which are about the same tone as her hair and skin have a neutralizing effect and make her seem all one color, giving monotony rather than harmony. The girl with brown hair and good complexion can wear the widest range of color. Usually she can wear almost any color that is beautiful in itself, if she uses taste in the intensity and values.

The training in art might be accomplished in various ways, but it must always be kept in mind that expression precedes appreciation in art, just as much as it does in music and in literature. No effective teaching substitute has been found for the actual working out of art principles into material. There are many mediums which may be used to this end—pencil, or paint, or cloth, or the selection and arrangement of house furnishings. But whichever is chosen, in the last analysis it will be found that the student must express herself before she is able to gain appreciation.

The experience a Minneapolis teacher had while room-hunting near the University of Chicago promises to become a common one under this type of teaching. The young woman had come to the end of her list with no success and when she entered the last house it seemed hopeless;—red wall paper with huge figures, green rugs with more figures, and the general furnishing corresponding to these backgrounds. How-

ever, it was warm and she was tired and the house was near the campus; so she said she would look at the room. To her amazement she was shown into a delightful room; the walls were of a soft warm gray; a dull green rug was on the floor; simple muslin curtains were at the windows; and a few pieces of bright copper and pottery were on the table and shelf. Several days later a little girl came into the room to sweep, and the young woman had an opportunity to satisfy her curiosity about the mysterious ownership of the room. Imagine her surprise to hear that it belonged to this child. She had had some house-furnishing in school and her mother had given her permission to furnish the room as she wished. This is significant of what we may expect as a general result of this Smith-Hughes plan,—in reality merely a good home economics plan. In short, the whole object of the related art course is to teach art through the problems which the girl will have to meet in her home.

WORTHY HOME MEMBERSHIP

Worthy home-membership as an objective calls for the development of those qualities that make the individual a worthy member of a family, both contributing to and deriving benefit from that membership.

This objective applies to both boys and girls. The social studies should deal with the home as a fundamental social institution and clarify its relation to the wider interests outside. Literature should interpret and idealize the human elements that go to make the home. Music and art should result in more beautiful homes and in greater joy therein. The coeducational school with a faculty of men and women should, in its organization and its activities, exemplify wholesome relations between boys and girls and men and women.

Home membership as an objective should not be thought of solely with reference to future duties. These are the better guaranteed if the school helps the pupils to take the right attitude toward present home responsibilities and interprets to them the contribution of the home to their development. . . . Some opportunity should be found to give boys a basis for the intelligent appreciation of the value of the well-appointed home and of the labor and skill required to maintain such a home, to the end that they may coöperate more effectively.—*Cardinal Principles of Secondary Education. Bureau of Education, Bull. 35.*

FOR THE HOMEMAKER

FOOD ON AN ARGENTINE RANCH—LONG AGO[1]

As I have mentioned our famous pigeon-pies, when describing the dovecote, I may as well conclude . . . . with a fuller account of our way of living as to food, a fascinating subject to most persons. The psychologists tell us a sad truth when they say that taste, being the lowest or least intellectual of our five senses, is incapable of registering impressions on the mind; consequently we cannot recall or recover vanished flavours as we can recover, and mentally see and hear, long past sights and sounds. Smells, too, when we cease smelling, vanish and return not, only we remember that blossoming orange grove where we once walked, and beds of wild thyme and pennyroyal when we sat on the grass, also flowering bean and lucerne fields filled and fed us, body and soul, with delicious perfumes. In like manner we can recollect the good things we consumed long years ago—the things we cannot eat now because we are no longer capable of digesting and assimilating them; it is like recalling past perilous adventures by land and water in the brave young days when we loved danger for its own sake. There was, for example, the salad of cold sliced potatoes and onions, drenched in oil and vinegar, a glorious dish with cold meat to go to bed on! Also hot maize-meal cakes eaten with syrup at breakast, and other injudicious cakes. As a rule it was a hot breakfast and midday dinner; an afternoon tea, with hot bread and scones and peach-preserve, and a late cold supper; for breakfast, mutton cutlets, coffee, and things made with maize. Eggs were plentiful—eggs of fowl, duck, goose, and wild fowl's eggs—wild duck and plover in their season. In spring—August to October—we occasionally had an ostrich or rhea's egg in the form of a huge omelette at breakfast, and it was very good. The common native way of cooking it by thrusting a rod heated red through the egg, then burying it in the hot ashes to complete the cooking, did not commend itself to us. From the end of July to the end of September we

[1] From W. H. Hudson's Far Away and Long Ago. E. P. Dutton & Company, New York, 1918. Pp. 198–202.

feasted on plover's eggs at breakfast. In appearance and taste they were precisely like our lapwings' eggs, only larger, the Argentine lapwing being a bigger bird than its European cousin. In those distant days the birds were excessively abundant all over the pampas where sheep were pastured, for at that time there were few to shoot wild birds and nobody ever thought of killing a lapwing for the table.

. . . . Our dinner consisted of meat and pumpkin, boiled or baked, maize "in the milk" in its season, and sweet potatoes, besides the other common vegetables and salads. Maize-meal puddings and pumpkin pies and tarts were common with us, but the sweet we loved best was a peach-pie, made like an apple-pie with a crust, and these came in about the middle of February and lasted until April or even May, when our late variety, which we called "winter peach," ripened.

My mother was a clever and thrifty housekeeper, and I think she made more of the peach than any other resident in the country who possessed an orchard. Her peach preserves, which lasted us the year round, were celebrated in our neighborhood. Peach preserves were in most English houses, but our house was alone in making pickled peaches: I think this was an invention of her own; I do not know if it has taken on, but we always had pickled peaches on the table and preferred them to all other kinds, and so did every person who tasted them.

I here recall an amusing incident with regard to our pickled peaches, and will relate it just because it serves to bring in yet another of our old native neighbors. . . . . His name was Ventura Gutierres, and he called himself an estanciero—a landowner and head of a cattle establishment.

. . . . One of Don Ventura's most delightful traits—that is, to us young people—was his loud voice. . . . . And so it pleased us very much when Don Ventura came one evening to see my father and consented to sit down to partake of supper with us. We loved to listen to his shouted conversation.

My parents apologized for having nothing but cold meats to put before him—cold shoulder of mutton, a bird, and pickles, cold pie, and so on. True, he replied, cold meat is never or rarely eaten by man on the plains. People do have cold meat in the house, but that as a rule is where there are children, for when a child is hungry, and cries for food, his mother gives him a bone of cold meat, just as in other countries where bread is common you give a child a piece of bread. However he would try cold meat for once. It looked to him as if there were

other things to eat on the table. "And what is this?" he shouted, pointing dramatically at a dish of large, very green-looking pickled peaches. Peaches—peaches in winter! This is strange indeed!

It was explained to him that they were pickled peaches, and that it was the custom of the house to have them on the table at supper. He tried one with his cold mutton, and was presently assuring my parents that never in his life had he partaken of anything so good—so tasty, so appetizing, and whether or not it was because of the pickled peaches, or some quality in our mutton which made it unlike all other mutton, he had never enjoyed a meal as much. What he wanted to know was how the thing was done. He was told that large, sound fruit, just ripening, must be selected for pickling; when the finger dents a peach it is too ripe. The selected peaches are washed and dried and put into a cask, then boiling vinegar, with a handful of cloves is poured in till it covers the fruit, the cask closed and left for a couple of months, by which time the fruit would be properly pickled. Two or three casks-full were prepared in this way each season and served us for the entire year.

It was a revelation, he said, and lamented that he and his people had not this secret before. He, too, had a peach orchard, and when the fruit ripened his family, assisted by all their neighbors, feasted from morning till night on peaches, and hardly left room in their stomachs for roast meat when it was dinner time. The consequence was that in a very few weeks—he could almost say days—the fruit was all gone, and they had to say, "No more peaches for another twelve months!" All that would now be changed. He would command his wife and daughters to pickle peaches—a cask-full, or two or three if one would not be enough. He would provide vinegar—many gallons of it, and cloves by the handful. And when they had got their pickled peaches he would have cold mutton for supper every day all the year round, and enjoy his life as he had never done before!

This amused us very much, as we knew that poor Don Ventura, notwithstanding his loud commanding voice, had little or no authority in his house; that it was ruled by his wife, assisted by a council of four marriageable daughters, whose present objects in life were little dances and other amusements, and lovers, with courage enough to marry them or carry them off.

A SIMPLE GUIDE FOR PLANNING MEALS

EMMA CONLEY

In charge of Home Economics Extension Division, University of Wisconsin

SEE THAT THERE IS SOME FOOD FROM EACH COLUMN IN YOUR DAILY DIET

SUBSTANCES NECESSARY FOR GROWTH ARE: PROTEIN, MINERAL MATTER, VITAMINES				SUBSTANCES WHICH FURNISH ENERGY ARE: FAT, STARCH, SUGAR, ALSO PROTEIN			SUBSTANCES WHICH FURNISH BULK
Foods rich in protein		Foods rich in mineral matter	Foods rich in vitamines	Foods rich in fat	Foods rich in starch	Foods rich in sugar	Bulky foods
Complete protein	Incomplete protein*						
Milk		Milk	Milk	Milk		Milk	
Eggs		Eggs	Eggs	Eggs			
Meat		Meat		Meat			
Fish		Fish		Salmon			
Cheese		Cheese	Cheese	Cheese			
Peanuts		Peanuts		Peanuts	Peanuts		Peanuts
Soybeans		Soybeans		Soybeans		Soybeans	Soybeans
	Beans	Beans			Beans		Beans
	Peas	Peas			Peas		Peas
	Cereals	Cereals			Cereals		Cereals
		Greenleaved vegetables	Greenleaved vegetables				Greenleaved vegetables
		Roots and tubers			Roots and tubers		Roots and tubers
		Fruits				Fruits	Fruits
						Sugar and syrups	
			Butter	Butter			
			Suet	Suet			
Bacon				Bacon			
				Lard			
				Vegetable fats			

*Incomplete protein can supply only part of the protein needs of the body.

Cereals include: wheat, oats, corn, rye, barley, rice, buckwheat.

Green leaved vegetables include: lettuce, endive, cress, cabbage, Brussel sprouts, beets, dock, mustard, dandelion greens, etc.

Roots and Tubers include: potatoes, onions, carrots, parsnips, beets, rutabagas, radishes, etc.

Fruits include: tomatoes, apples, oranges, peaches, pears, pineapple, grapefruit, raisins, dates, figs.

DIVIDE YOUR FOOD DOLLAR INTO FIFTHS

If you buy all your food, of every dollar spent use:

20 cents, more or less, for vegetables and fruits. Group I
20 cents, or more, for milk and cheese. } Group II
20 cents, or less, for meat, fish, eggs, etc. }
20 cents, or more, for bread and cereals. Group III
20 cents, or less, for sugar, fat, tea, coffee, chocolate, and other groceries } Groups IV and V, and food accessories.

If you use "more" for cereals, and "less" for meat, you will not have to spend so many dollars to get the needed food, but you will not find it so easy to provide an attractive and palatable diet.

CHANGES IN THE COST OF LIVING

As reported in the *Industrial News Survey* for April 21–28, 1919.

Since signing of the armistice, changes in the average cost of the different items entering into the budget were:

All items	*2.8 per cent decrease*
Food	4.4 per cent decrease
Shelter	1.7 per cent increase
Clothing	6.2 per cent decrease
Fuel, heat and light	1.3 per cent increase
Sundries	No change

For the entire period July, 1914–March, 1919, the increases in the respective items were:

All items	*61.3 per cent*
Food	75 per cent
Shelter	22 per cent
Clothing	81 per cent
Fuel, heat and light	57 per cent
Sundries	55 per cent

United States Bureau of Labor Statistics reports "that if a certain amount of food cost $1 at average retail prices of 1913, the same quantity would have cost $1.02 in 1914, $1.01 in 1915, $1.14 in 1916, $1.46 in 1917, and $1.68 in 1918."

THE USE OF WEIGHT STANDARDS IN HANDLING FOOD PRODUCTS

E. H. S. BAILEY

There are still many commodities, not sold in packages, but by the dozen, bushel or quart, that will eventually be sold by weight, since that is the most equitable method for handling them. Jobbers and wholesalers long ago, for greater convenience of handling, weighed these products and translated that weight into barrels or bushels if necessary. In the United States we still hold the old English denominations of weights and measures, instead of adopting the more rational metric system of continental and Latin countries. In a similar way we follow the methods of our ancestors and buy and sell some products by volume instead of by weight, although we admit that the latter is simpler and more equitable for all parties.

The practice of selling potatoes, onions, carrots, parsnips, turnips, beets, apples, tomatoes, asparagus, green beans and peas, and even lettuce, by the pound is being extensively introduced, and many city markets allow no other method of sale. This should become universal. What purchaser who has seen the grocer try to fit a quarter or a half peck of beets, carrots, turnips, or sweet potatoes into a cylindrical measure will not welcome a method of sale that requires that they shall be sold by weight only?

The objection may be urged that we are familiar with the older method and can not readily compute how much we are getting for our money if weights are used. It would only take a short time to learn that a bushel of potatoes weighs 60 pounds; of sweet potatoes, 50 pounds; of apples, 48 pounds; of onions, 57 pounds; of tomatoes, 56 pounds, and so on. And when we buy on a weight basis we shall have a better conception of the real nutritive value of the foods purchased. For the benefit of the purchaser, many public markets post tables of pounds per bushel of most commodities, and a simple computation makes the relative values understood.

This same method of sale should be extended to oranges, lemons, bananas, squashes, cantaloupes, watermelons, celery, eggs, and even ice cream. What the purchaser desires, especially at the present time, when he must know about food values, whether he will or not, is a certain definite amount of the product, *by weight*, for a certain definite sum of money. If the price is too high he can decline to purchase.

There are eggs and eggs, not only in quality and previous conditions of storage, but also in size, or, more properly, weight. The average weight of a hen's egg is two ounces, or about 60 grams. We can not control the fashion with different breeds of poultry as to the size of eggs which they produce, and so, if eggs are sold by the dozen, the hen laying the small variety takes an undue advantage over the hen producing the large eggs. Sell by weight and all this "class discrimination" is avoided.

It is perfectly natural that, since cream is a liquid, and very properly sold by the quart, ice cream, one of its products, should be sold in the same way. The butter factory, however, buys milk by the pound, with a butter-fat test. It will not be a popular innovation to the manufacturer of ice cream to sell his product by the pound, but since the product is often puffed up by the use of other constituents to occupy as much space as possible, would it not be a more equitable method for the purchaser?

We seem to be nearing the point where, on account of the rapidly fluctuating price of wheat flour and other bread stuffs, the baker will be compelled to make only half-pound, pound, or two-pound loaves for family use, and charge so much per pound, even if pennies must be used in making change. Why not have a fluctuation in the price of a loaf of bread, as well as of a quart of milk? There is already a marked tendency to return to the use of the penny, in the interest of thrift and economy. It is very widely urged that the government be requested to coin 2½-cent pieces for the same reason. The saving of even the half-penny will be welcomed by those who must save to live.

Another argument for strenuously urging the universal adoption of the handling by weight of all possible commodities is that in this way we shall gradually get familiar with the idea that the energy produced by the food when taken into the animal system or the human machine is in proportion to the weight—not the *bulk*—of the food consumed. It will take time to settle this idea in the consumer's mind, but will ultimately find lodgment.

Following this method of buying very naturally will be the gradual realization of the fact that there is a vast difference in nutritive value between foods like the fruits, which contain over 80 per cent of water, and the grains, which contain only 15 per cent. In fact, we shall purchase for actual food value for the energy the material is capable of producing.—*Bulletin of the Kansas State Board of Health, Vol. XIII, No. 10, October, 1917.*

A BABY ARISTOCRACY

Babies today have their own aristocratic circle to which only the most fortunate babies can belong. The Children's Bureau of the United States Department of Labor, in a study lately made, shows that the baby who belonged to the so-called "aristocracy" had a much better chance of living than the baby who could not qualify.

To be a member of the aristocracy a baby had to meet five requirements, selected because the Bureau's studies of nearly 25,000 babies have proved their worth in saving babies' lives.

The father must have earned a fair wage, the mother must not have been gainfully employed either during the year before or the year after the baby's birth; she must have had at least fair medical care when the baby was born; and both father and mother must have been able to read and write. Finally, the house the baby lived in must have been well-ventilated, clean, sanitary, and not over-crowded.

Only 205 of the 1210 babies born alive in a Massachusetts manufacturing city in the year studied could meet these requirements. Fifteen of the 205 died before they were a year old, so that the infant mortality rate for the "aristocracy" was 73, which is 24 points more favorable than the rate for the city as a whole. Of the 1005 babies who could not qualify for the "aristocracy" 112 died before they were a year old, making their infant mortality rate 111—a rate 14 points less favorable than that for the city as a whole, and 38 points less favorable than that for the "aristocracy."

Fifty-five per cent of the babies were barred from the "aristocracy" because their father's earnings were less than the standard established. On the other hand, wages in this city were comparatively good. Trade union conditions prevailed.

The mothers of less than a fifth of the babies were gainfully employed during some part of the baby's first year. In this respect these babies were fortunate, for in a neighboring city two-fifths of the mothers included in a similar study had worked in order to supplement the family income.

Few babies were excluded on the score that their mothers had not had medical care when they were born. On the other hand, the proportion of deaths in the first day and in the first month of life was unusually high. During this early period the baby's chance of life is largely dependent on the care the mother had before the baby was born and at

his birth. This city's most crying need, "seems to be that of an adequate force of nurses to do prenatal work, as well as a clinic where expectant mothers might obtain advice and medical care."

A number of babies were unable to qualify for the "aristocracy" because their mothers could not read and write. The report points out that invaluable sources of information on the care of her baby are closed to the illiterate mother.

Housing conditions were required to meet a fixed standard, also. The greatest mortality was found among the babies who lived in the most congested homes, but the majority of the babies included in the study were confortably housed. Laws to preclude the possibility of future over-crowding ought to be passed, however.

Although on each point separately the number of babies in unfavorable surroundings is small, yet 83 per cent of babies of this city failed to meet one or more of the requirements, and fell into the larger group where the hazards were greater than among the "Baby Aristocracy."

CHILD HEALTH ALPHABET[1]

MRS. FREDERICK PETERSON

A is for Apples and also for Air;
Children need both and we have them to spare.
B is for Butter and Beans and Brown Bread,
Also for Baths before Breakfast or Bed.
C is for Cereals and Cocoa too;
Consider the Calories coming to You.
D is for Dates, the kind that You eat,
Deliciously sweet and far cheaper than Meat.
E is the Excellent Edible Egg,
One daily at least, dear Children, we beg.
F is for Fruits whether fresh, dried or stewed;
Dried, at the Grocer's, you'll buy them, if shrewd.
G is for Gaining, as every Child could;
A half pound a Month is the least that he should.

[1] Reprinted from a booklet by the same name, issued by the Child Health Organization, New York City.

H is for Height, be as tall as you can,
Weight up to Height makes a healthy strong Man.
I is for Iron in Spinach and Eggs,
Builds Red Blood and Sinews for strong Arms and Legs.
J is for Jam, and also for Joy,
Which spread on his Bread it brings to a Boy.
K is for Kitchen so spick and so span,
We all like our Food from a shining clean Pan.
L is for Luncheon served hot in the School;
We wish all the Teachers could follow this Rule.
M is for Milk which makes Muscle and Bone;
Not less than a pint every day till you're grown.
N is for News of Normal Nutrition,
The one way to get into tip top Condition.
O is for Oatmeal, the finest of food;
With Milk for your Breakfast there's nothing so good.
P is for Prunes, Potatoes and Peas,
And Patriots who will be glad to eat these.
Q is for Quiet, we frequently need;
After Meals don't run at the top of your speed.
R is for Rest and Round Rosy Faces;
Rest is a thing which nothing replaces.
S is for Sugar and Syrup and Sweets;
Every Child must have occasional Treats.
S is important and therefore I hope
You'll pardon my specially mentioning Soap.
T is a Topic which Trouble begins;
Both Tea and Coffee for Children are Sins.
U Understanding the best way to live,
United for Service our Country to give.
V is for Vegetables; if you're too slim,
These Victuals are full of Vigor and Vim,
W is for Water, the best thing to drink
Between Meals as often as ever we think.
X is for Xtras of Soup or of Milk,
For a thin little Girl till she's finer than Silk.
Y is for You, and I tell you the Truth,
Learn to be healthy and Strong in your Youth.
Now march for it, Children, with Drum and with Fife,
Z is the Zest which Health gives to Life.

EDITORIAL

What is Waste? An English point of view of what constitutes waste, as expressed in the following quotations,[1] is one to which we may well take heed. Our conception of thrift, now that the war motive is removed, is in danger of becoming a narrow one, and when it becomes narrow it will arouse the old antagonism. If thrift is to be a living thing, if it is to be a reality in our national life, it must be something more than "going without private pleasures now so that we may have them later;" it must mean rather "refraining from individual waste so that we may have energy for common creation."

During the war we learned what waste really is; that it is not merely waste of products but waste of labour. Before the war many never connected the product with the labour needed to produce it. They thought of labour, of energy, as unlimited in amount. Money gave its possessor the right to spend it as he chose. To him who had money to spend, the world was like an automatic machine. You put your penny, or pound, in the slot, and got what you wanted. That was what people meant when they talked about demand and supply. To them the chief, or the only waste was the waste of money, never the waste of labour by the manner in which money was spent. But in the war, we all suddenly discovered that there was more in production than the penny and the slot and what came out of it. There was also labour. This labour was urgently needed for purposes of war, and, at the same time, was strictly limited in supply. It could not, therefore, be wasted in producing unnecessary things for individual consumers. The people who had made for us all kinds of things that we could very well do without, were needed to make munitions and other war-products; and it would be treachery to the country to divert them from that vital task with our private demands. To some extent the Government prevented us from doing that; but we also prevented ourselves. We asked ourselves—Do we really need this? Can we do without it? Are we using up more than our fair share of the energy of the country?

So we rose to a new idea of the nation as all working together for a common purpose; and we saw that it was our duty, not only to use our own energy for that purpose, but also not to divert the energy of others from it. There was

[1] Quotations are from a pamphlet entitled Our Common Purpose, by A. Clutton Brock, National W.S.S. Committee, London.

for us a double duty, the positive duty of work for the common cause and the negative duty of abstinence. We discovered for ourselves, what the political economists have long been telling us, that money is not necessarily doing good because it "employs labour." The question always is—How does it employ it? We learned that prosperity depends not only on the exchange of commodities, but also on the nature of the commodities exchanged. Moreover, we saw that, in war time at least, a rich man would do better to throw his money into the sea than to employ it in making many men labour to supply his own private and superfluous wants. It has been said that if a German millionaire, living in England and allowed complete freedom of action, had desired to serve his country as best he could, he would have done it, not by spying or even by sabotage, but by employing as many English workmen as possible to build him a palace. We saw that was true of any millionare, whether English or German, and that it was true also of poorer people. And this we saw because, in the war, the country had a common purpose, in the light of which we judge all production and all expenditure.

Before the war abstinence meant to most of us, if we practised it at all, merely saving, and saving for ourselves. People saved so that they might be able to spend more at some future time. But now abstinence must have a new and better meaning. It is not merely a private wisdom, or a duty we owe to our families; it is a duty we owe to the country. We must not look at our bank books and decide whether we can afford this or that; we must ask whether the nation can afford it.

In this matter of abstinence, if we will, we can all think and act for ourselves. It is often said that no one can define what is a necessary and what is a luxury. That may be true, if the words are regarded as general terms, but each one of us can tell quite clearly what he himself needs and what he does not. He can exercise his own sense of duty on the question, as it concerns himself, without troubling about definitions, and without asking whether his neighbours are doing their duty. Of one thing he may be quite sure, that the more he goes without, the more there will be for others. Nor need the ordinary private man puzzle himself much over the production of necessaries. His duty is to go without superfluities, so that the necessaries may be produced. What is needed of him is wise spending, that is to say, spending that will not foster the production of superfluities.

Abstinence, thought of merely as abstinence, is a dull, meaningless thing, but if it means happier cities, better houses, music, and all kinds of beauty in our streets, and the wilderness blossoming like the rose, then it is that sharp but glorious discipline which all men must undergo if they are to rise from an animal herd into a human fellowship.

BOOKS AND LITERATURE

Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS if the Journal price is listed.

Textiles and Clothing. By ELLEN BEERS MCGOWAN and CHARLOTTE A. WAITE. New York: The Macmillan Company, 1919, pp. 268. $1.10. By mail of the Journal, $1.18.

The successful use of "Textiles" by Woolman and McGowan, in college and normal school classes, has created a demand for a simpler presentation of the subject, adapted to high schools. Mrs. McGowan and Miss Charlotte Waite collaborating have responded to this demand and present a new text, which, but for the war would have reached the high school teachers last year.

The authors have reorganized the material in the former book, have amplified it, and have added new features which will be welcomed. The chapter on primitive industries has been omitted and many of the others condensed to cover only essentials of information. There are a number of illustrations which have not appeared before in a text of this kind. Outlines of the contents at the beginning of each chapter stand out for convenience and emphasis. The authors have presented knitted fabrics, as well as woven ones, an obvious need hitherto neglected. The information on bed linens, table linens, carpets, and laces, is a distinct contribution. The tabulation of standard fabrics of cotton, linen, wool, and silk, contains data which should be seized upon by the teacher and made vivid by the identification of those fabrics in the class room. Questions at the end of each chapter will aid the pupil to fix in mind the important points. "Questions and problems for further study" are suggested which will guide the progressive teacher in improving her fund of knowledge. The chapters on care and repair of clothing, and economics and hygiene of clothing are unusually well written.

It is to be regretted that the starting point for teaching textiles in high school, viz., fabrics in immediate use is not discussed until the fourth chapter is reached; for, in all teaching, and particularly in high school teaching, the psychological approach is more effective than the logical. Readier interest would have been attained by starting with materials with which the high school girl is already familiar, and introducing processes of manufacture later.

GRACE G. DENNY,
University of Washington.

Save and Have. (*A book of "Saving Graces" for American homes.*) Prepared by the Editorial Board of the University Society. The University Society, New York City, 1919, pp. 142.

This is a small book with a large purpose. This purpose as stated by the authors is "to give in the smallest compass, practical suggestions as to such a careful use of money and things as to enable the reader to have a surplus of money for things worth while."

It uses only 140 pages in the effort to reach its goal. It gives suggestions in accounting as the basis of budget making and shows how to save in the four largest groups of expenditures—food, clothing, operation, and higher life. It gives hints in thrifty purchasing through quantity buying, through true bargains and coöperative groups, through reading labels and knowing the weight of package goods. It shows how good care of clothing, food, and

utensils prolongs their service and saves money.

The basic facts are taken from well-known and in most cases reliable and named authorities. The facts are presented in a new form and often with a subtle humor that attracts attention and drives home the lesson.

One section of special interest deals with the automobile and ways of cutting its expense. Blank forms are given for its daily expense account, a record of tire mileage and monthly and yearly summaries. An illuminating catechism helps the owner of a car to keep a check on its cost.

Another section gives sensible suggestions as to how children may earn money and be taught its value. It especially helps parents to discover possibilities for constructive play in simple materials.

The book gives little that is new, but selections from old material are given with a new emphasis on thrift that is pertinent to the times and its special needs.

The bibliographies might be improved and brought nearer to date.

While the book may be most valuable to the beginning homemaker, the housewife of experience will find much to interest her. The teacher and student will be grateful for the condensation which the book has achieved and perhaps for new light on familiar topics.

S. Maria Elliott,
Simmons College.

A Manual of Home-Making. Compiled by Martha Van Rensselaer, Flora Rose, Helen Canon. New York: The Macmillan Co., 1919, pp. 661. Illustrated. $2.50. By mail of the Journal, $2.67.

"A Manual of Home-Making" is, as the title states, a compilation of material, most of which has appeared in the valuable bulletins for farmers' wives, sent out in the Cornell Reading Courses. There are also included Farmers' Bulletin 861, U. S. Department of Agriculture, on Stain Removal, and an abridgment of Measurements for the Household, of the U. S. Bureau of Standards.

The book will be especially welcomed as making generally available the Cornell bulletins, since so far they have not been easily obtained except by those living in New York State. These bulletins have various authorships, so that many points of view are represented. The contents of the book are divided into four parts: Part I, The House and Its Furnishing; Part II, Household Management; Part III, Clothing; Part IV, Food and Nutrition.

One questions somewhat the title. Are we losing our distinction between homemaking and housekeeping? Should not a manual of homemaking at least suggest the care of children, the general training and the education of the family?

The book is intended primarily for housekeepers, and contains much valuable information, with a brief bibliography at the close of some of the sections.

Sarah J. McLeod.

A Dietary for Miners. By S. H. Brockunier (Engin. and Min. Jour., 105 (1918). No. 14, pp. 627–630).

Such questions as cost, responsibility for food served, market conditions, wholesale purchase, wastes and leftovers and the importance of adequate storage facilities are discussed, and a dietary proposed which the author states is based on a study of actual conditions interpreted from a dietary standpoint. The net cost of the proposed ration on the Pacific Coast in 1915 was 47 cents per man per day, with an added cost of 22 cents for proper preparation and serving, amounting to a total of $20.70 per month for food and its service. A sample per man per day ration is suggested for a miner of average weight, as well as general menus, calculated to provide 5058 calories, of which protein would contribute 672 calories. The author in discussing suitability of foods makes some practical suggestions.

The question of lunch baskets is considered and a lunch suggested which is calculated to provide 1440 calories. The need for varying the dishes served by proper rotation for both meals and lunch basket is one of the points insisted upon.

Institution Recipes. By EMMA SMEDLEY. Published by the author, 6 East Front Street, Media, Pa. Third Edition, 1919, pp. 324. $3.00. By mail of the Journal, $3.10.

The preface to the third edition of this book states "In the preparation of this edition it has been possible to test and revise many of the recipes . . . . the most important feature of the book is the addition of the caloric value of each recipe and of a single serving of the recipe. The figures taken are usually for the raw foods, which in many cases are much higher than those of the cooked foods. . . . . This information should be a great help to the busy dietitian who has little time for computing food values and yet wishes to serve a balanced menu and to know that the family is being sufficiently nourished."

A comparison of the "Contents" in this and in earlier editions shows three new chapter headings—"Cereals Used as Vegetables," "Sauces for Meats and Vegetables," and "Soap."

The chapters on "Organization of the School Lunch" and "Equipment" have been omitted from this edition, as they are to be included in a new book now in preparation.

More Recipes for Fifty. By FRANCES LOWE SMITH. Boston: Whitcomb and Barrows, 1918, pp. 225. $1.50. By mail of the Journal, $1.60.

This volume, supplementary to the earlier "Recipes and Menus for Fifty" offers needed help to those engaged in the preparation of food for any number beyond twenty-five. The recipes can be easily divided into halves, and even into quarters. While the book was written for war-times it is still of value because so many war-time recipes have proved so popular that they have come to stay. With wheat back to a pre-war basis, the use of substitutes will to a great extent discontinue, but we have become accustomed to the taste of barley, rye, rice, and the other cereals in our breads, and find they make a variety that we are not willing to let go. The tables on page 12 for substitutes will be valuable in the changing of the substitutes back into the usual ingredients. The suggestions on pages 12, 13, and 14 are valuable in helping to solve the problems of how to use the fats and the left-overs.

ELIZABETH KELLY.

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American Charities. Amos G. Warner. Revised by Mary Roberts Coolidge. New York: Thomas Y. Crowell Company, 1919, pp. 541. $2.50.

Dietaries Suitable for Secondary Schools, Colleges, Hostels, Clubs, etc. Dorothy C. Mooreand Charles E. Hecht. London: National Food Reform Association, 1919, pp. 54. Price 1/3 net.

Practical Home Nursing. Louise Henderson, R. N. New York: The Macmillan Company, 1919, pp. 224. $1.50.

Successful Canning and Preserving. Ola Powell. Lippincott's Home Manuals. Second edition, revised and enlarged. Philadelphia: J. B. Lippincott Company, 1918, pp. 405. $2.00.

The War Garden Victorious. Charles Lathrop Pack. Philadelphia: J. B. Lippincott Company, 1919, pp. 179. Complimentary.

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Maternity Care and the Welfare of Young Children in a Homesteading County in Montana. Viola L. Paradise. Rural Child Welfare Series No. 3, Bureau Publication No. 34.

An Outline for a Birth-Registration Test. Miscellaneous Series No. 12, Bureau Publication No. 54.

The States and Child Labor. Children's Year Leaflet No. 13, Bureau Publication No. 58.

Issued by the United States Treasury Department and the United States Department of Agriculture:

Thrift Leaflets: No. 1, Is Thrift Worth While? No. 2, Seven Steps Toward Saving; No. 3, Wise Spending Saves Clothing for the Family; No. 4, Saving Time and Money by Simple Housecleaning.

Issued by the United States Public Health Service:

Keep Well Series: No. 3, How to Avoid Tuberculosis; No. 4, Diphtheria.

The Notifiable Diseases. Reprint No. 498 from the Public Health Reports.

Safe Milk for the Small Town. K. E. Miller. Reprint No. 497 from the Public Health Reports.

Treatment and Disposal of Creamery Wastes. Earle B. Phelps. Reprint No. 496 from the Public Health Reports.

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Report of an Investigation of the Akron Industrial Salvage Co.

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The Growth and Senescence of White Mice Fed on Pituitary (Anterior Lobe) Tissue, Tethelin, Egg Lecithin, or Cholesterol. T. B. Robertson, L. A. Ray, *Jour. Biol. Chem.*, 37 (1919), pp. 377–465. Five separate articles are included, dealing with various phases of the subject.

The Nutritive Value of Cocoanut Globulin and Cocoanut Press Cake. C. O. Johns, A. J. Finks, Mabel S. Paul, *Jour. Biol. Chem.*, 37 (1919), pp. 497–502.

The Chemical Investigation of Spoiled Meat. Ammonia tests for meat spoilage. K. G. Falk, Emil J. Baumann, Grace McGuire, *Jour. Biol. Chem.*, 37 (1919), pp. 523–550.

The Nutritive Value of the Wheat Kernel and its Milling Products. T. B. Osborne, L. B. Mendel. *Jour. Biol. Chem.*, 37 (1919), pp. 557–601.

Textiles and Clothing

Domestic Glove Situation Easier. *Dry Goods Economist*, Apr. 5, 1919.

Lower Price of Higher Quality. *Dry Goods Economist*, Apr. 5, 1919.

Cotton Fabrics for Summer Frocks. *Le Costume Royal*, May, 1919.

Reactions of the War on Taste as Seen in N. Y's. Newest Hotels. *Good Furniture*, Mar., 1919.

Tapestry Portrayal of the "Sun King" as Jupiter Made upon Hand Loom. *Country Life*. Mar. 1919.

Reproduction of a Chinese Brocade—Cheney Bros. *Decorative Furnisher*, Apr., 1919.

Metropolitan Museum Holds Exposition of American Made Furnishings. *Decorative Furnisher*, Feb., 1919.

Some "Made-in-America" Fabrics. *Decorative Furnisher*, Feb., 1919.

Tapestry Panels—Rug—Silk Brocade. *Decorative Furnisher*, Mar., 1919.

Block Prints for Mural and Fabric Decorations. *Touchstone*, Apr., 1919.

Textile Birds Ancient and Medieval. *Good Furniture*, Apr., 1919.

Fascinating Designs in Cretonne Hangings. *House Beautiful*, Apr., 1919.

Developing A National Art Type. M. D. C. Crawford. *House Beautiful*, Apr., 1919.

Textile Motifs from Cleveland Museum. *School Arts Magazine*, Apr., 1919.

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Miscellaneous

The American Homemaker and Reconstruction. Adelaide S. Baylor, *Jour. N. E. A.*, Nov., 1918.

The Secret of Thrift. A New Aladdin's Lamp for Every Boy and Girl. Clifford B. Upton, *Teachers Coll. Rec.*, Nov., 1918.

Health Exercises for Everyday Use. Jesse F. Williams, *Teachers Coll. Rec.*, Nov., 1918.

Prevention of Child Mortality. A. Gertrude Hines, *Amer. Jour. Nursing*, Nov., 1918.

Building a Child Welfare Program in War Time. Mary Titzel, *Amer. Jour. Soc.*, Jan., 1919.

Training for Rural Leadership. Thomas Smart, *Amer. Jour. Soc.*, Jan., 1919.

Organized Leisure as a Factor in Conservation. Carol Aronovici, *Amer. Jour. Soc.*, Jan., 1919.

NEWS FROM THE FIELD

The Twenty-first Annual Session of the Inland Empire Educational Association met in Spokane, April 2 to 4. Educators from the entire Northwest together with many eastern men and women were present at the meeting.

The Home Economics Section offered the following program: How to Make Home Economics Work Function, Ava B. Milam, Oregon Agricultural College; Discussion, Effie Raitt, University of Washington; Development of Vocational Home Economics, Dr. Louise Stanley, Federal Board for Vocational Education, Washington, D. C.; Trade and Industrial Education for Girls and Women, Mrs. Anna L. Burdick, Federal Agent for the Industrial Education of Women and Girls, Washington, D. C.

The Vocational Section devoted most of its program to the discussion of Smith-Hughes work. Vocational Homemaking as a School Course was presented by Anne E. Arnold, Principal, Girls' Polytechnic High School, Portland, Oregon.

At the business meeting, Lilian Tingle, of the University of Washington, was elected President, and Mildred P. French, Supervisor of Home Economics, Spokane, Washington, Secretary.

The Tacoma Home Economics Association devoted itself this past year to activities connected with the Red Cross Canteen, Home Service, and Child Welfare. The following officers have served since October: President, Alta D. Beymer; Vice-president, Mrs. Erminie V. Lamb; Secretary-Treasurer, Elizabeth A. Redway.

The Oregon Home Economics Association held their second annual session May 17, 1919, with Ava B. Milam presiding. The program was as follows: How to Make Home Economics Function, Helen Lee Davis, Oregon Agricultural College, Corvallis, Ore.; Discussion, led by Agnes Craig, Washington State College, Pullman, Wash.; Smith-Hughes Home Economics, Dr. Louise Stanley, Federal Board for Vocational Education; Continuation Classes, Maude Murchie, State Supervisor for Home Economics, Sacramento, Cal.

Some of the Affiliated Home Economics Associations have recently reported newly elected officers. Those not already published in the news columns are as follows:

Cleveland: Adelaide Van Duzer, President; Estelle Stearns, First Vice-President; Elisabeth Parsons, Second Vice-President; Mabel Crossen, Third Vice-President; Lenore Delahunt, Secretary; Kathryne Herbert, Treasurer.

Detroit: Lulu Becker, President; Irene Kenny, Vice-President; Florence Ackerman, Correspondent Secretary; Louise Clawson, Recording Secretary; Joy Blanchard, Treasurer; Charlotte Keen, Councilor.

Indiana State Teachers Assn. Home Economics Section: Geraldine Hadley, President; Lucy B. Hawk, Vice-President; Mary E. Commack, Secretary-Treasurer; Elizabeth Cowan, Councilor.

Kansas City: Martha Rouse, President; Jessie Griffith, First Vice-President; Nell Leonard, Second Vice-President; Frances Backstrom, Secretary; Miss Griffin, Treasurer; Ella Willsey, Councilor.

Michigan: Mary F. Baldwin, acting president; Alice M. Cimmer, secretary; Alice R. Wallin, treasurer.

Greater New York: Martha Westfall. President; Mrs. Edward Thomas, Secretary,

Texas: Laura F. Neale, president; Emma E. Pirie, vice-president; Jessie Rambo, secretary; Mrs. J. M. Harris, treasurer.

Life Members of the American Home Economics Association: Sarah Louise Arnold, Simmons College, Boston, Mass.; Anna Barrows, Teachers College, New York City; Melvil Dewey and Mrs. Melvil Dewey, Lake Placid Club, New York; Louisa A. Nicholass, Mary Hemenway School of Household Arts, Framingham, Mass.; Mrs. Orlo J. Price, Lansing, Mich.; Robert H. Richards, Mass. Inst. of Technology, Boston. Miss Nicholass was made a life member by the Alumnae Association of the Mary Hemenway School of Household Arts.

Practice Cottage, Hood College. Typical of the present movement in home economics education is the practice house recently dedicated at Hood College, Frederick, Md., and known, after the donor, as David Strawn Cottage.

The practice house was designed by the students of the home economics department. The building accommodates 15 students and a teacher with permanent living quarters.

On the second floor there is a sleeping porch large enough to accommodate eight persons.

Indiana University. A unique course for teachers will be given in the Home Economics Department this summer on how to present to school children the subject of "How to Spend Money." This course will be in charge of Helen C. Goodspeed, State Superintendent of Home Economics for Wisconsin. A demonstration class has been arranged for in connection with this course.

The League for Preventive Work in Boston gave valuable help with the food problem during the influenza epidemic. Its Dietetic Bureau, in charge of Lucy H. Gillett, prepared simple practical suggestions which the social worker could leave in homes where such suggestions could be used intelligently. In other cases the workers at the Bureau went into the homes to give personal advice and to do intensive work. In all except three of these families the mother was spending enough money to buy sufficient food for the family but it was not spent so as to get the needed nourishment. In all cases except one the mothers received and acted upon suggestions eagerly and there was a decided improvement in the health conditions.

Child Survey, Boston. The weighing and measuring campaign for children under 5 brought out last year the fact that 5,000 children in Boston were below normal weight. The child welfare committee of the city has decided to investigate the reasons for this condition, and after the survey to recommend constructive measures.

Home Service Work of the American Red Cross will be continued as a peace time activity, and in some communities, particularly those where there are no other organized agencies for social service, will be expanded to include others besides the families of soldiers and sailors, though these will receive special attention. The present policy will be followed of giving help only to those who ask for it and never going where the offer of assistance is unwelcome. There will be a scrupulous care to avoid duplicating or interfering with the work which is being done for social betterment by any other agencies.

Notes. The New York City Commissioner of Markets is giving courses of lectures to women on marketing, as a means of lowering the cost of living through more intelligent buying.